

[0003]

This reaction is not a complete reversible reaction. Thus a phenomenon occurs involving the suspension of discharge reaction at a valence (oxidation number) of 2.2 when nickel oxyhydroxide ( $\text{NiOOH}$ ) is converted back to nickel hydroxide ( $\text{Ni(OH)}_2$ ) during discharge. Accordingly, the negative electrode has always electricity left therein in an amount corresponding to a valence of 0.2. This remaining electricity makes no contribution to battery capacity.